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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,033	02/09/2004	Lec Watts	60,130-1985;03MRA0135	6920
26096	7590	04/13/2006	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			FOX, JOHN C	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,033

Applicant(s)

WATTS ET AL.

Examiner

John Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

This action is responsive to the communication filed March 27, 2006.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2-5, 11, 13, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Thauer, of record.

Note bearing sleeve 3, conical sealing face 9 on the valve shaft, conical face 10 of the bearing, washer 13, spring 11 and nut 5'. The upper face of washer 13 and the lower face of bearing 3 can be read as sealing faces since they are flat, abutting surfaces.

Applicant's arguments filed have been fully considered but they are not persuasive. The structure shown by Thauer includes flat washer 13, flat lower face of bearing 3 and a spring acting to press them together with enough force to ensure that bearing faces 9 and 10 form a seal. It is within the range of typical industrial practice of finishes and materials that it would be inherent to this structure that a seal of some degree is formed between the washer and bearing. For example, a sufficient seal to prevent atmospheric gases from entering the bearing. Even though Thauer considers the seal at 9, 10 sufficient, the inherent seal between the washer and bearing anticipates the claims.

Claims 6 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kipp et al.

Thauer teaches the claimed valve except uses a coil spring and a threaded in bearing sleeve. Kipp et al show a similar valve with a wave washer and a press fit

bearing. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used a wave spring instead of a coil spring in Thauer in view of the well known equivalence of the two springs, and to press fit the bearing sleeve instead of thread it in to secure the sleeve better.

Claims 7-10, 12, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer.

The use of the recited materials to make the valve of Thauer is considered to be an obvious matter of engineering design in view of the well known nature of such materials and their industrial use. As to claim 12, the modification of Thauer to be an eccentric flap seating on two seats is obvious in view of applicant's admission that Figures 4-5 are not patentably distinct from Figure 3.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Lee and Welty et al.

Thauer shows the claimed invention except for the coatings. Lee teaches a bearing with antifriction coatings comprising DLC to reduce friction between the mating surfaces of the bearing. Welty et al teach a valve with a DLC coating to reduce friction between sliding surfaces and includes two coatings 21, 23 of titanium nitride, for example, to support the DLC, which coatings are read as being ceramic materials. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used such plural coatings and DLC in the valve of Thauer to reduce friction between the bearing surfaces, in view of the teaching reference of Lee which shows the desirability of such coatings in bearings.

Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Rautenstauch.

Thauer shows the claimed valve except for the details of these claims. Cotton et al show a bearing and packing for a rotary valve with conical face 19 on stem or spindle 16, packing 35 and a gland 36 having a running fit with the stem 16 and a conical profile sealing with the packing 35. The packing 35 inherently comprises a bearing sleeve in that it serves a bearing function. The bolted down gland 36 is analogous to the spring and washer of Thauer in that they are both well known methods of applying compressive force to the shaft seals. It would have been obvious at the time the invention was made for one of ordinary skill in the art to have used a packing and bearing configuration as taught by Rautenstauch in the valve of Thauer to improve the seal thereof. The use of the spring biasing of Thauer to maintain a compressive force instead of the bolts of Rautenstauch is considered obvious in view of the well known equivalence of the two systems.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the


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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Increased Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keasel Eric can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Fox
Primary Examiner
Art Unit 3753